



Carryl MacLeod
Project Manager, Marketing Business Unit

Alameda County Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

RECEIVED
By Alameda County Environmental Health 10:39 am, Nov 06, 2017

Re: Former Texaco Service Station No. 359766
2700 23rd Avenue
Oakland, California
ACEH Case RO0003098

I have read and acknowledge the content, recommendations and/or conclusions contained in the attached *Third Quarter 2017 Groundwater Monitoring and Sampling Report* submitted on my behalf to ACDEH's FTP server and the SWRCB's GeoTracker website.

This letter is submitted pursuant to the requirements of California Water Code Section 13267(b)(1) and the regulating implementation entitled Appendix A pertaining thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge

Sincerely,

Carryl MacLeod
Project Manager

Attachment: *Third Quarter 2017 Groundwater Monitoring and Sampling Report*



November 2, 2017

Reference No. 062086

Ms. Karel Detterman
Alameda County Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

**Re: Third Quarter 2017 Groundwater Monitoring and Sampling Report
Former Texaco Service Station 359766
2700 23rd Avenue
Oakland, California
ACEH Case RO0003098**

Dear Ms. Detterman:

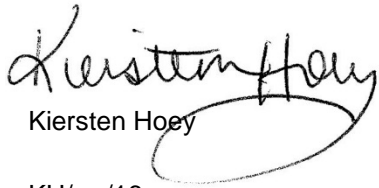
GHD is submitting this *Third Quarter 2017 Groundwater Monitoring and Sampling Report* for the site referenced above (Figure 1) on behalf of Chevron Environmental Management Company (CEMC). Groundwater monitoring and sampling was performed by Blaine Tech Services (Blaine Tech) of San Jose, California and their *Third Quarter 2017 Monitoring Report* is included as Attachment A. Eurofins Calscience's *Analytical Results* report is included as Attachment B. Current and historical groundwater monitoring and sampling data are summarized in Table 1 and current data are presented on Figure 2.



Please contact the CEMC Project Manager, Carryl MacLeod at (925) 842-3201 or GHD Project Manager, Kiersten Hoey at (510) 420-3347 if you have any questions or require additional information.

Cordially,

GHD



Kiersten Hoey



Greg Barclay PG 6260



KH/cw/16
Encl.

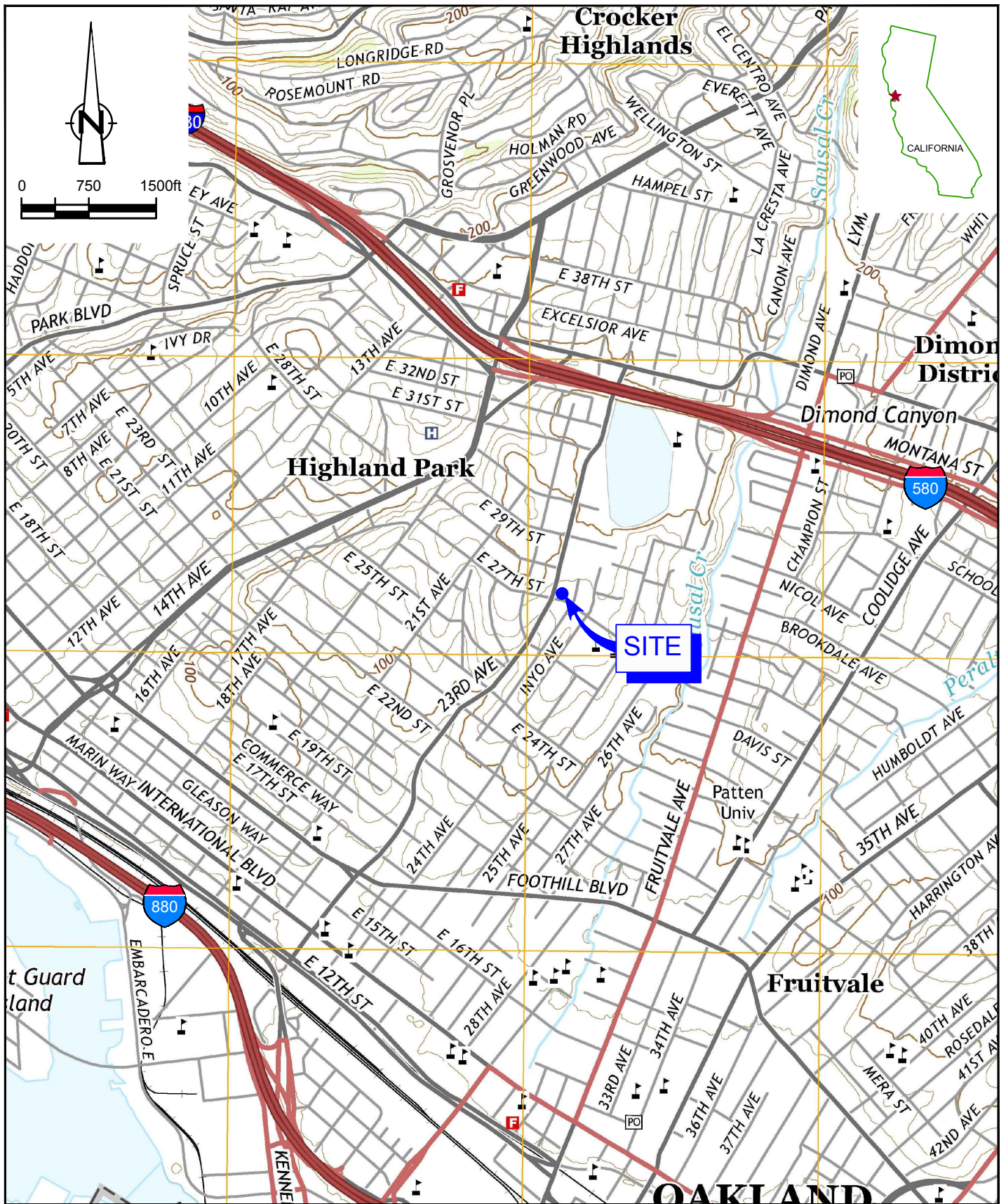
- Figure 1 Vicinity Map
- Figure 2 Groundwater Elevation Contour and Hydrocarbon Concentration Map

- Table 1 Groundwater Monitoring and Sampling Data

- Attachment A Monitoring Data Package
- Attachment B Laboratory Analytical Report

cc: Ms. Carryl MacLeod, Chevron EMC (*electronic copy*)
Pedro and Maria Pulildo, Property Owner

Figures



SOURCE: USGS QUAD MAP; OAKLAND EAST, CA., 2015.



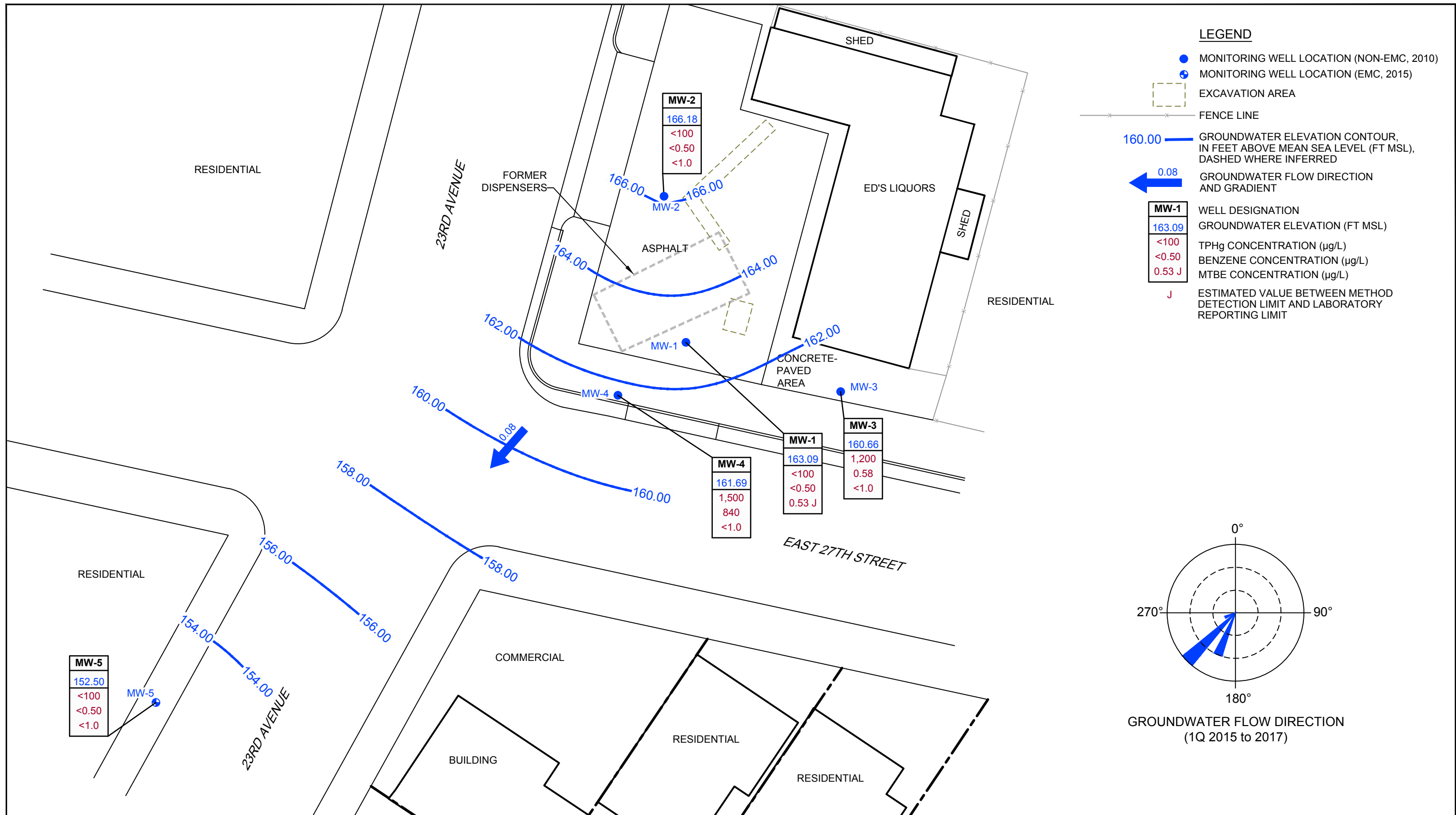
FORMER TEXACO STATION 359766
 2700 23rd AVENUE
 OAKLAND, CALIFORNIA

62086-95

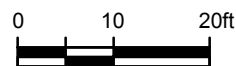
Oct 25, 2017

VICINITY MAP

FIGURE 1



SOURCE: WELL LOCATIONS BASED ON GEO COORDINATES CONVERTED TO US SURVEY FEET STATE PLAN CA ZONE 3, BY MORROW SURVEYING IN FEB 24, 2015



FORMER TEXACO STATION 359766
2700 23rd AVENUE
OAKLAND, CALIFORNIA

62086-95
Nov 2, 2017

GROUNDWATER ELEVATION CONTOUR AND HYDROCARBON CONCENTRATION MAP - SEPTEMBER 7, 2017 **FIGURE 2**

Table

Table 1
Groundwater Monitoring and Sampling Data
Former Texaco Service Station 359766 (Ed's Liquors)
2700 23rd Avenue
Oakland, California

Location	Date	TOC ^a	DTW	GWE	HYDROCARBONS			VOCS													ADDITIONAL	
					TPH-MO	TPH-DRO	TPH-GRO	B	T	E	X	MTBE by SW6260	Naphthalene	TBA	DIPE	ETBE	TAME	1,2-DCA	EDB			
	Units	ft	ft	ft-amsl	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	
MW-1	11/18/2010 ¹	168.84	7.93	160.91	<250	<50	--	--	--	--	--	1.3	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
	02/14/2012 ¹	168.84	7.31	161.53	--	<50	<50	<0.50	<0.50	<0.50	<0.50	1.2	--	--	--	--	--	--	--	--	--	--
	03/13/2015	168.90	12.11	156.79	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/19/2015	168.90	11.31	157.59	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/29/2015	168.90	10.83	158.07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/22/2015	168.90	6.44	162.46	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	03/28/2016	168.90	6.08	162.82	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/19/2016	168.90	5.41	163.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/08/2016	168.90	5.79	163.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/16/2016	168.90	7.72	161.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	03/07/2017	168.90	5.20	163.70	--	--	<100	4	0.6 J	<1	0.6 J	0.9 J	--	--	--	--	--	--	--	--	--	--
	06/20/2017	168.90	4.98	163.92	<120	<100	<100	<1	<1	<1	<1	0.8 J	--	--	--	--	--	--	--	--	--	--
	09/07/2017	168.90	5.81	163.09	<250	47 J	<100	<0.50	<1.0	<1.0	<1.0	0.53 J	--	--	--	--	--	--	--	--	--	--
MW-2	11/18/2010 ¹	170.33	7.52	162.81	<250	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
	02/14/2012 ¹	170.33	6.37	163.96	--	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	--	--	--	--	--	--	--	--
	03/13/2015	170.41	8.10	162.31	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/19/2015	170.41	6.92	163.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/29/2015	170.41	7.95	162.46	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/22/2015	170.41	4.49	165.92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	03/28/2016	170.41	3.83	166.58	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/19/2016	170.41	3.71	166.70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/08/2016	170.41	4.77	165.64	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/16/2016	170.41	5.92	164.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	03/07/2017	170.41	2.94	167.47	--	--	<100	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	--	--
	06/20/2017	170.41	3.71	166.70	<120	<100	<100	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--	--	--
	09/07/2017	170.41	4.23	166.18	<250	54	<100	<0.50	<1.0	<1.0	<1.0	<1.0	--	--	--	--	--	--	--	--	--	--
MW-3	11/18/2010 ¹	168.67	5.14	161.15	<250	2,100	3,700	<0.5	<0.5	<0.5	0.84	<0.5	<0.5	<2.0	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	3.0 ^a 0.68 ^b 2.0 ^c 2.2 ^d 6.6 ^e
	02/14/2012 ¹	168.67	4.98	163.69	--	<1,500	3,400	<0.50	<0.50	1.2	<0.50	<0.50	--	--	--	--	--	--	--	--	--	--
	03/13/2015	168.71	6.50	162.21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/19/2015	168.71	5.93	162.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/29/2015	168.71	6.98	161.73	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/22/2015	168.71	8.01	160.70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	03/28/2016	168.71	7.04	161.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/19/2016	168.71	7.14	161.57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/08/2016	168.71	9.81	158.90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/16/2016	168.71	8.97	159.74	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	03/07/2017	168.71	5.13	163.58	--	--	4,400	0.5 J	0.7 J	3	1	<1	--	--	--	--	--	--	--	--	--	--

Table 1
Groundwater Monitoring and Sampling Data
Former Texaco Service Station 359766 (Ed's Liquors)
2700 23rd Avenue
Oakland, California

Location	Date	TOC ^a	DTW	GWE	HYDROCARBONS			VOCS												ADDITIONAL
					TPH-MO	TPH-DRO	TPH-GRO	B	T	E	X	MTBE by SW6260	Naphthalene	TBA	DIPE	ETBE	TAME	1,2-DCA	EDB	
	Units	ft	ft	ft-amsl	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
	06/20/2017	168.71	5.93	162.78	<120	980	5,100	0.7 J	1 J	5	3	<1	--	--	--	--	--	--	--	--
	09/07/2017	168.71	8.05	160.66	64 J	1,900	1,200	0.58	0.69 J	3.8	2.2 J	<1.0	--	--	--	--	--	--	--	--
MW-4	11/18/2010 ¹	168.40	--	--	<250	2,800	26,000	2,800	1,500	550	3,100	<0.5	210	<200	<50	<50	<50	<50	<50	790 ¹ 210 ¹
	02/14/2012 ¹	168.40	6.45	161.95	--	<3,000	27,000	1,500	660	520	1,500	<5.0	--	--	--	--	--	--	--	--
	03/13/2015	168.47	10.70	157.77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/19/2015	168.47	9.63	158.84	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/29/2015	168.47	11.04	157.43	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/22/2015	168.47	10.31	158.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	03/28/2016	168.47	9.32	159.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/19/2016	168.47	8.38	160.09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	09/08/2016	168.47	8.60	159.87	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/16/2016	168.47	10.21	158.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	03/07/2017	168.47	6.70	161.77	--	--	16,000	1,300	220	380	560	<10	--	--	--	--	--	--	--	--
	06/20/2017	168.47	5.72	162.75	<120	670	9,000	1,000	140	210	250	<10	--	--	--	--	--	--	--	--
	09/07/2017	168.47	6.78	161.69	62 J	2,400	1,500	840	91	160	190	<1.0	--	--	--	--	--	--	--	--
MW-5	02/26/2015 ²	162.42	17.81	144.61	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--
	03/13/2015	162.42	16.48	145.94	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	06/19/2015	162.42	10.92	151.50	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--
	09/29/2015	162.42	12.29	150.13	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--
	12/22/2015	162.42	13.46	148.96	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--
	03/28/2016	162.42	8.22	154.20	--	--	<100	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--
	06/19/2016	162.42	9.18	153.24	--	--	<100	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--
	09/08/2016	162.42	10.78	151.64	--	--	<100	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--
	12/16/2016	162.42	10.99	151.43	--	--	<100	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--
	03/07/2017	162.42	10.85	151.57	--	--	<100	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--
	06/20/2017	162.42	10.34	152.08	<120	<110	<100	<1	<1	<1	<1	<1	--	--	--	--	--	--	--	--
	09/07/2017	162.42	9.92	152.50	<250	38 J	<100	<0.50	<1.0	<1.0	<1.0	<1.0	--	--	--	--	--	--	--	--
QA	09/07/2017	--	--	--	--	--	<100	<0.50	<1.0	<1.0	<1.0	<1.0	--	--	--	--	--	--	--	--

Table 1
Groundwater Monitoring and Sampling Data
Former Texaco Service Station 359766 (Ed's Liquors)
2700 23rd Avenue
Oakland, California

Location	Date	TOC ^a	DTW	GWE	HYDROCARBONS			VOCs											ADDITIONAL		
					TPH-MO	TPH-DRO	TPH-GRO	B	T	E	X	MTBE by SW8260	Naphthalene	TBA	DIPE	ETBE	TAME	1,2-DCA		EDB	
	Units	ft	ft	ft-amsl	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	

Abbreviations and Notes:

-- = Not analyzed

<x and ND = Not detected above the method detection limit x.

Total purgeable petroleum hydrocarbons (TPPH) by EPA Method 8260B

Total petroleum hydrocarbons as motor oil (TPHmo) and TPH as diesel (TPHd) by modified EPA Method 8015B with silica gel cleanup

Total petroleum hydrocarbons as gasoline (TPHg) by modified EPA Method 8015B

Benzene, Toluene, Ethylbenzene, Xylenes by EPA Method 8260B

Methyl tertiary butyl ether (MTBE), di-isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), 1,2 dichloroethane (1,2-DCA), 1,2-dibromoethane (EDB), tertiary butyl alcohol (TBA), naphthalene by EPA Method 8260B

Volatile organic compounds (VOCs) by EPA Method 8260B

a = Top of casing elevation was surveyed by Morrow Surveying on February 24, 2015; coordinates are California State Plan Zone 3, from GPS observation using CSDS virtual survey network, coordinate datum is NAD 83, reference geoid is GEOID03, and vertical datum is NAVD 88 from GPS observations. Prior to 2015, a survey was completed by licensed surveyor Ty Hawkins on December 20, 2010; based on California Coordinate System NAD 83, Zone III (2002.00), and elevations based on NAVD 88.

b = n-butyl benzene

c = 4-isopropyl toluene

d = Sec-butyl benzene

e = Isopropylbenzene

f = n-propyl benzene

g = 2-butanone

h = 4-methyl-2-pentanone

i = 1,2,4-trimethylbenzene

j = 1,3,5-trimethylbenzene

1 = Sampled by previous consultant

2 = Well development

Attachment A Monitoring Data Package

WELL GAUGING DATA

Project # 170907-mw1 Date 9-7-17 Client CHEVRON

Site 2200 23RD AVE, OAKLAND, CA

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or <u>FOC</u>	Notes
MW-1	1127	2					5.81	19.68	↓	
MW-2	1120	2				4.23	19.48			
MW-3	1121	2				8.05	19.72			
MW-4	1126	2				6.78	19.36			
MW-5	1200	2				9.92	19.82			

CHEVRON (Nor. Cal) LOW FLOW WELL MONITORING DATA SHEET

Project #: 170907-ww1	Station #: 35-9766
Sampler: ww	Start Date: 9-7-17
Well I.D.: Mw-1	Well Diameter: ② 3 4 6 8
Total Well Depth: 19.68	Depth to Water: 5.81
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	DO Meter: YSI PRO PWS

Purge Method:

Sampling Method:

Instruments Used:

Peristaltic

Dedicated Tubing

Myron L Ultrameter

HACH Turbidimeter

Bladder Pump

New Tubing

Durham Geoslope Indicator

YSI 556 Flow-Thru Cell PRO PWS

Electric Submersible

GeoTech Interface Probe

YSI 550 DO Meter

MMC Interface Probe

Other: _____

Flow Rate: 100 ml/min

Pump Depth: 18'

Time	Temp. (°C or °F)	pH	Cond. (mS or μ S)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water
1247	22.5	7.96	800	29	0.71	-14.0	300	5.89
1250	22.4	7.96	897	21	0.65	-18.8	600	5.97
1253	23.2	7.94	889	19	0.56	-23.9	900	6.05
1256	23.3	7.89	839	11	0.44	-24.2	1200	6.13
1259	23.4	7.84	815	10	0.43	-22.7	1500	6.13
1302	23.3	7.79	814	10	0.43	-20.1	1800	6.13

Did well dewater? Yes No Amount actually evacuated: 1800 mL

Sampling Time: 1305 Sampling Date: 9-7-17

Sample I.D.: Mw-1-W-170709 Laboratory: CALSCI

Analyzed for: TPH-G BTEX MTBE TPH-D TPH-MD Other: _____

Equipment Blank I.D.: @ _____ Duplicate I.D.: _____

CHEVRON (Nor. Cal) LOW FLOW WELL MONITORING DATA SHEET

Project #: 170907-ww1	Station #: 35-9766
Sampler: ww	Start Date: 9-7-17
Well I.D.: mw-2	Well Diameter: <input checked="" type="radio"/> 3 <input type="radio"/> 4 <input type="radio"/> 6 <input type="radio"/> 8 <input type="radio"/> _____
Total Well Depth: 19.43	Depth to Water: 4.23
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: <input checked="" type="radio"/> PVC <input type="radio"/> Grade	DO Meter: YSI PRO PWS

Purge Method:

Sampling Method:

Instruments Used:

- Peristaltic
- Bladder Pump
- Electric Submersible

- Dedicated Tubing
- New Tubing

- Myron L Ultrameter
- HACH Turbidimeter
- Durham Geoslope Indicator
- YSI-556 Flow-Thru Cell
- PRO PWS
- GeoTech Interface Probe
- YSI 550 DO Meter
- MMC Interface Probe
- Other: _____

Flow Rate: 100 ml/min

Pump Depth: 18'

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water
1213	23.0	8.22	977	33	0.96	-18.4	300	4.39
1216	23.5	8.16	981	29	0.82	-21.6	600	4.65
1219	24.7	8.05	981	28	0.61	-24.5	900	4.65
1222	24.8	8.00	960	26	0.59	-28.1	1200	4.65
1225	24.7	7.97	956	27	0.55	-30.5	1500	4.65

Did well dewater? Yes No Amount actually evacuated: 1500 mL

Sampling Time: 1230 Sampling Date: 9-7-17

Sample I.D.: Mw-2-W-170709 Laboratory: CALSCI

Analyzed for: TPH-G BTEX MTBE TPH-D Other: TPH-mo

Equipment Blank I.D.: @ Time Duplicate I.D.:

QA @ 1105

CHEVRON (Nor. Cal) LOW FLOW WELL MONITORING DATA SHEET

Project #: 17090 FWW 2	Station #: 35-9766
Sampler: CR	Start Date: 9/7/17
Well I.D.: MW-3	Well Diameter: ② 3 4 6 8 ____
Total Well Depth: 19.72	Depth to Water: 8.05
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: <u>PVC</u> Grade	DO Meter: —

Purge Method:

Sampling Method:

Instruments Used:

Peristaltic

Bladder Pump

Electric Submersible

Flow Rate: 100 mL/min

Dedicated Tubing

New Tubing

Myron L Ultrameter

Durham-Geoslope Indicator

GeoTech Interface Probe

MMC Interface Probe

HACH Turbidimeter

YSI 556 Flow-Thru Cell

YSI 550 DO Meter

Other: _____

Pump Depth: 18'

Time	Temp. (°C or °F)	pH	Cond. (mS or <u>µS</u>)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or <u>mL</u>)	Depth to Water
1303	22.3	6.87	541	15	0.75	-109.4	300	8.13
1306	22.8	6.60	537	14	0.58	-111.7	600	8.16
1309	22.8	6.57	537	12	0.46	-114.3	900	8.18
1312	22.8	6.52	535	12	0.48	-116.1	1200	8.21
1315	22.8	6.50	534	10	0.45	-117.9	1500	8.24

Did well dewater? Yes No

Amount actually evacuated: 1500 mL

Sampling Time: 1316

Sampling Date: 9/7/17

Sample I.D.: MW-3-W-170709

Laboratory: CalScience

Analyzed for: TPH-G BTEX MTBE TPH-D

Other: See Cec

Equipment Blank I.D.: @ _____ Time

Duplicate I.D.: _____

CHEVRON (Nor. Cal) LOW FLOW WELL MONITORING DATA SHEET

Project #: 170907-ww1	Station #: 35-9766
Sampler: ww	Start Date: 9-7-17
Well I.D.: Mw-4	Well Diameter: ② 3 4 6 8
Total Well Depth: 19.36	Depth to Water: 6.78
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: PVC Grade	DO Meter: YSI PRO PWS

Purge Method:

Sampling Method:

Instruments Used:

Peristaltic

Dedicated Tubing

Myron L Ultrameter

HACH Turbidimeter

Bladder Pump

New Tubing

Durham Geoslope Indicator

YSI 556-Flow-Thru Cell PRO PWS

Electric Submersible

GeoTech Interface Probe

YSI 550 DO Meter

MMC Interface Probe

Other: _____

Flow Rate: 100 mL/min

Pump Depth: 18'

Time	Temp. (°C or °F)	pH	Cond. (mS or μS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water
1318	21.8	7.50	1471	26	0.98	-69.8	300	6.93
1321	21.8	7.46	1476	21	0.97	-71.5	600	7.10
1324	22.6	7.37	1481	20	1.00	-71.5	900	7.10
1327	22.7	7.36	1478	19	1.05	-70.6	1200	7.10

Did well dewater? Yes No Amount actually evacuated: 1200 mL

Sampling Time: 1330 Sampling Date: 9-7-17

Sample I.D.: Mw-4-W-170709 Laboratory: CALSER

Analyzed for: TPH-G BTEX MTBE TPH-D TPH-MD Other: _____

Equipment Blank I.D.: @ Time Duplicate I.D.:

CHEVRON (Nor. Cal) LOW FLOW WELL MONITORING DATA SHEET

Project #: <u>170907-wiw2</u>	Station #: <u>35-9766</u>
Sampler: <u>CR</u>	Start Date: <u>9/7/17</u>
Well I.D.: <u>MW-5</u>	Well Diameter: <u>2</u> 3 4 6 8 _____
Total Well Depth: <u>19-82</u>	Depth to Water: <u>9.92</u>
Depth to Free Product: <u>—</u>	Thickness of Free Product (feet): <u>—</u>
Referenced to: <u>PVC</u> Grade	DO Meter: <u>—</u>

Purge Method: Peristaltic Bladder Pump Electric Submersible
 Sampling Method: Dedicated Tubing New Tubing
 Instruments Used: ~~Myron L Ultrameter~~ HACH Turbidimeter
Durham Geoscope Indicator YSI 556 Flow-Thru Cell
 GeoTech Interface Probe YSI 550 DO Meter
 MMC Interface Probe Other: _____
 Flow Rate: 100 ml/min Pump Depth: 18'

Time	Temp. (°C or °F)	pH	Cond. (mS or <u>µS</u>)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or <u>mL</u>)	Depth to Water
1216	21.7	7.68	1012	5	1.04	-42.5	300	10.03
1219	22.0	7.52	1006	6	0.52	-63.9	600	10.06
1222	22.0	7.48	998	6	0.48	-70.4	900	10.10
1225	22.2	7.46	995	4	0.43	-75.5	1200	10.12
1228	22.4	7.45	993	4	0.41	-78.2	1500	10.14

Did well dewater? Yes <u>No</u>	Amount actually evacuated: <u>1500 mL</u>
Sampling Time: <u>1229</u>	Sampling Date: <u>9/7/17</u>
Sample I.D.: <u>MW-5-W-170709</u>	Laboratory: <u>Calscience</u>
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: <u>See cal</u>
Equipment Blank I.D.: @ _____	Duplicate I.D.: _____

CHAIN OF CUSTODY FORM

Chevron Environmental Management Company ■ 6111 Bollinger Canyon Rd. ■ San Ramon, CA 94583 COC (of)

Chevron Site Number: 359766
 Chevron Site Global ID: I060000004218
 Chevron Site Address: 2700 23rd Ave., Oakland, CA
 Chevron PM: Camy MacLeod
 Chevron PM Phone No.: (925) 790-3964
 Retail and Terminal Business Unit (RTBU) Job
 Construction/Retail Job

Chevron Consultant: GHD
 Address: 5900 Hollis St., Suite A, Emeryville, CA
 Consultant Contact: Kiersten Hoey
 Consultant Phone No. 510-420-3347
 Consultant Project No. 170907-0001
 Sampling Company: Blaine Tech Services
 Sampled By (Print): WILLIAM WONG
 Sampler Signature: *[Signature]*

Charge Code: NWRTB-0098247-0-OML
 NWRTB 00SITE NUMBER-0-WBS
 (WBS ELEMENTS):
 SITE ASSESSMENT: A1L REMEDIATION IMPLEMENTATION: R6L
 SITE MONITORING: OML OPERATION MAINTENANCE & MONITORING: M1L
 THIS IS A LEGAL DOCUMENT. ALL FIELDS MUST BE FILLED OUT CORRECTLY AND COMPLETELY.
 CHEVRON MULTILINE SO: 0015245626

SAMPLE ID		Matrix	Top Depth	Date (yymmdd)	Sample Time	# of Containers	Container Type	Other Lab	Temp. Blank Check Temp.	Special Instructions	Preservation Codes
MAW-1-W-170709	W			170907	1305	10	Various		1105 1305	Run TPH-D and TPH-MO with silica gel cleanup	H=HCL T=Thiosulfate N=HNO3 B=NaOH S=H2SO4 O=Other
MAW-2-W-170709					1230	10			4°C 4°C	Must meet lowest detection limits possible for 8260 compounds.	
MAW-3-W-170709					1316	10					
MAW-4-W-170709					1330	10					
MAW-5-W-170709					1229	10					
QA-W-170709					1105	2	MUL UOAS				

Relinquished By: *[Signature]* Company: BLAINE T&E (W) SERUL (ES) Date/Time: 9-7-17 1510
 Relinquished By: *[Signature]* Company: BLAINE T&E (W) SERUL (ES) Date/Time: 9-8-17/1035
 Relinquished By: *[Signature]* Company: BLAINE T&E (W) SERUL (ES) Date/Time: 9-8-17/1035

Relinquished To: *[Signature]* Company: BLAINE T&E (W) SERUL (ES) Date/Time: 9-7-17 1510
 Relinquished To: *[Signature]* Company: BLAINE T&E (W) SERUL (ES) Date/Time: 9-8-17/1035
 Relinquished To: *[Signature]* Company: BLAINE T&E (W) SERUL (ES) Date/Time: 9-8-17/1035

Turnaround Time: Standard 72 Hours 48 hours 72
 Hours 24 Hours 48 hours 72
 Other 5 Days
 Sample Integrity: (Check by lab on arrival)
 Intact: On Ice: Temp: COC #

WELLHEAD INSPECTION CHECKLIST

Client CHEVRON Date 9-7-07

Site Address 2100 23RD AVE, OAKLAND, CA

Job Number 190907-WW1 Technician WV CR

Well ID	Well Inspected - No Corrective Action Required	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)	Repair Order Submitted
MW-1	X							
MW-2	X							
MW-3	X							
MW-4	X							
MW-5	X							

NOTES: _____

SOURCE RECORD **BILL OF LADING**

FOR PURGEWATER RECOVERED FROM GROUNDWATER WELLS AT CHEVRON FACILITIES IN THE STATE OF CALIFORNIA. THE PURGE-WATER WHICH HAS BEEN RECOVERED FROM GROUNDWATER WELLS IS COLLECTED BY THE CONTRACTOR AND HAULED TO THEIR FACILITY IN SAN JOSE, CALIFORNIA FOR TEMPORARILY HOLDING PENDING TRANSPORT BY OTHERS TO FINAL DESTINATION.

The contractor performing this work is BLAINE TECH SERVICES, INC. (BLAINE TECH), 1680 Rogers Ave. San Jose CA (408) 573-0555). BLAINE TECH. is authorized by Chevron Environmental Management Company (CHEVRON EMC) to recover, collect, apportion into loads, and haul the purgewater that is drawn from wells at the CHEVRON EMC facility indicated below and to deliver that purgewater to BLAINE TECH for temporarily holding. Transport routing of the purgewater may be direct from one CHEVRON EMC facility to BLAINE TECH; from one CHEVRON EMC facility to BLAINE TECH via another CHEVRON EMC facility; or any combination thereof. The well purgewater is and remains the property of CHEVRON EMC.

This **Source Record BILL OF LADING** was initiated to cover the recovery of Non-Hazardous Well Purgewater from wells at the Chevron facility described below:

35-9766 CHEVRON # CAROL MOLEED Chevron Engineer

2200 23RD AVE, OAKLAND, CA
street number street name city state

WELL I.D.	GALS.	WELL I.D.	GALS.
MW-1	0.5 0.5 (circled)		
MW-2	0.4		
MW-3	0.4		
MW-4	0.3		
MW-5	0.4		

added equip. _____
rinse water 12.9
any other adjustments _____

TOTAL GALS. RECOVERED 5
loaded onto BTS vehicle # 101

BTS event # 170907-wwv1 time 1405 date 9/7/17

Transporter signature [Signature]

REC'D AT BTS-SJ time 1500 date 9/7/17

Unloaded/received by signature [Signature]

Permit To Work

for Chevron EMC Sites

Client: CHEVRON

Site Address: 2100 23 RD AVE

Date 9-7-17

Job Number: 170907-ww2 Technician(s): mw CR

Pre-Job Safety Review

1. JMP reviewed, site restrictions and parking/access issues addressed.

Reviewed:

2. Special Permit Required Task Review

Are there any conditions or tasks that would require:

	Yes	No
Confined space entry	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Working at height	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Lock-out/Tag-out	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Excavations greater than 4 feet deep	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Excavations within 3 feet of a buried active electrical line or product piping or within 10 feet of a high pressure gas line.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Use of overhead equipment within 15 feet of an overhead electrical power line or pole supporting one	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Hot work	<input type="checkbox"/>	<input checked="" type="checkbox"/>

If "Yes" was the answer to any of the Special Permit Required Tasks above, the Project Manager will contact the client and arrange to modify the Scope of Work so that the Special Permit Required Tasks are not required to be performed by Blaine Tech Services employees.

3. Is a Traffic Control Permit required for today's work?

Yes No

If so is it in the folder?

Is it current?

Do you understand the Traffic Control Plan and what equipment you will need?

On site Pre-Job Safety Review

1. Reviewed and signed the site specific HASP.
2. Route to hospital understood.
3. Reviewed "Groundwater Monitoring Well Sampling General Job Safety Analysis included in the HASP.
4. Exceptional circumstances today that are not covered by the HASP, JSA or JMP have been addressed and mitigated.
5. Understands procedure to follow, if site circumstances change, to address new site hazards.
6. There are no unexpected conditions which would make your task a Special Permit Required Task. If there is, contact your Project Manager.
7. All site hazards have been communicated to all necessary onsite personnel during tailgate safety meeting.
8. After lunch tailgate safety meeting refresher conducted.

If Checklist Task cannot be completed, explain:

Permit To Work Authority:

[Signature]
Name

ROSS Mike Wren
Title

PROJ mgr
Title

9-7-17
Date

0
Time

Attachment B Laboratory Analytical Report



Calscience



WORK ORDER NUMBER: 17-09-0614

The difference is service



AIR | SOIL | WATER | MARINE CHEMISTRY

Analytical Report For

Client: GHD

Client Project Name: 359766

Attention: Kiersten Hoey
5900 Hollis Street
Suite A
Emeryville, CA 94608-2008

Vikas Patel

Approved for release on 09/19/2017 by:
Vikas Patel
Project Manager

ResultLink ▶

Email your PM ▶

Eurofins Calscience, Inc. (Calscience) certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analyses, if any, is attached to this report. The results in this report are limited to the sample(s) tested and any reproduction thereof must be made in its entirety. The client or recipient of this report is specifically prohibited from making material changes to said report and, to the extent that such changes are made, Calscience is not responsible, legally or otherwise. The client or recipient agrees to indemnify Calscience for any defense to any litigation which may arise.

Contents

Client Project Name: 359766
Work Order Number: 17-09-0614

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	4.1 EPA 8015B (M) TPH Diesel SGC (Aqueous).	6
	4.2 EPA 8015B (M) TPH Motor Oil (Aqueous).	8
	4.3 EPA 8015B (M) TPH Gasoline (Aqueous).	10
	4.4 EPA 8260B BTEX/MTBE (Aqueous).	12
5	Quality Control Sample Data.	17
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6	Sample Analysis Summary.	25
7	Glossary of Terms and Qualifiers.	26
8	Chain-of-Custody/Sample Receipt Form.	27

Condition Upon Receipt:

Samples were received under Chain-of-Custody (COC) on 09/09/17. They were assigned to Work Order 17-09-0614.

Unless otherwise noted on the Sample Receiving forms all samples were received in good condition and within the recommended EPA temperature criteria for the methods noted on the COC. The COC and Sample Receiving Documents are integral elements of the analytical report and are presented at the back of the report.

Holding Times:

All samples were analyzed within prescribed holding times (HT) and/or in accordance with the Calscience Sample Acceptance Policy unless otherwise noted in the analytical report and/or comprehensive case narrative, if required.

Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of ≤ 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.

Quality Control:

All quality control parameters (QC) were within established control limits except where noted in the QC summary forms or described further within this report.

Subcontractor Information:

Unless otherwise noted below (or on the subcontract form), no samples were subcontracted.

Additional Comments:

Air - Sorbent-extracted air methods (EPA TO-4A, EPA TO-10, EPA TO-13A, EPA TO-17): Analytical results are converted from mass/sample basis to mass/volume basis using client-supplied air volumes.

Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are always reported on a wet weight basis.



Calscience

Sample Summary

Client: GHD	Work Order:	17-09-0614
5900 Hollis Street, Suite A	Project Name:	359766
Emeryville, CA 94608-2008	PO Number:	
	Date/Time Received:	09/09/17 09:10
	Number of Containers:	52

Attn: Kiersten Hoey

Sample Identification	Lab Number	Collection Date and Time	Number of Containers	Matrix
MW-1-W-170709	17-09-0614-1	09/07/17 13:05	10	Aqueous
MW-2-W-170709	17-09-0614-2	09/07/17 12:30	10	Aqueous
MW-3-W-170709	17-09-0614-3	09/07/17 13:16	10	Aqueous
MW-4-W-170709	17-09-0614-4	09/07/17 13:30	10	Aqueous
MW-5-W-170709	17-09-0614-5	09/07/17 12:29	10	Aqueous
QA-W-170709	17-09-0614-6	09/07/17 11:05	2	Aqueous

Return to Contents



Calscience

Detections Summary

Client: GHD
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Work Order: 17-09-0614
Project Name: 359766
Received: 09/09/17

Attn: Kiersten Hoey

Page 1 of 1

Client SampleID

Analyte	Result	Qualifiers	RL	Units	Method	Extraction
MW-1-W-170709 (17-09-0614-1)						
TPH as Diesel	47	SG,HD,J	8.0*	ug/L	EPA 8015B (M)	EPA 3510/SG 10
Methyl-t-Butyl Ether (MTBE)	0.53	J	0.31*	ug/L	EPA 8260B	EPA 5030C
MW-2-W-170709 (17-09-0614-2)						
TPH as Diesel	54	HD,SG	50	ug/L	EPA 8015B (M)	EPA 3510/SG 10
MW-3-W-170709 (17-09-0614-3)						
TPH as Gasoline	1200	HD	200	ug/L	EPA 8015B (M)	EPA 5030C
TPH as Motor Oil	64	SG,HD,J	53*	ug/L	EPA 8015B (M)	EPA 3510/SG 10
TPH as Diesel	1900	HD,SG	50	ug/L	EPA 8015B (M)	EPA 3510/SG 10
Benzene	0.58		0.50	ug/L	EPA 8260B	EPA 5030C
Ethylbenzene	3.8		1.0	ug/L	EPA 8260B	EPA 5030C
Toluene	0.69	J	0.24*	ug/L	EPA 8260B	EPA 5030C
p/m-Xylene	1.8		1.0	ug/L	EPA 8260B	EPA 5030C
o-Xylene	0.47	J	0.23*	ug/L	EPA 8260B	EPA 5030C
Xylenes (total)	2.2	JA	1.0	ug/L	EPA 8260B	EPA 5030C
MW-4-W-170709 (17-09-0614-4)						
TPH as Gasoline	1500	HD	200	ug/L	EPA 8015B (M)	EPA 5030C
TPH as Motor Oil	62	SG,HD,J	53*	ug/L	EPA 8015B (M)	EPA 3510/SG 10
TPH as Diesel	2400	HD,SG	50	ug/L	EPA 8015B (M)	EPA 3510/SG 10
Benzene	840		5.0	ug/L	EPA 8260B	EPA 5030C
Ethylbenzene	160		1.0	ug/L	EPA 8260B	EPA 5030C
Toluene	91		1.0	ug/L	EPA 8260B	EPA 5030C
p/m-Xylene	170		1.0	ug/L	EPA 8260B	EPA 5030C
o-Xylene	18		1.0	ug/L	EPA 8260B	EPA 5030C
Xylenes (total)	190		1.0	ug/L	EPA 8260B	EPA 5030C
MW-5-W-170709 (17-09-0614-5)						
TPH as Diesel	38	SG,HD,J	8.0*	ug/L	EPA 8015B (M)	EPA 3510/SG 10

Subcontracted analyses, if any, are not included in this summary.

* MDL is shown

Analytical Report

GHD
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 09/09/17
Work Order: 17-09-0614
Preparation: EPA 3510/SG 10
Method: EPA 8015B (M)
Units: ug/L

Project: 359766

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1-W-170709	17-09-0614-1-I	09/07/17 13:05	Aqueous	GC 45	09/13/17	09/18/17 11:47	170913B06

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Diesel	47	50	8.0	1.00	SG,HD,J

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decanoic Acid	0	0-1	
n-Octacosane	92	50-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2-W-170709	17-09-0614-2-I	09/07/17 12:30	Aqueous	GC 45	09/13/17	09/15/17 01:29	170913B06

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Diesel	54	50	8.0	1.00	HD,SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decanoic Acid	0	0-1	
n-Octacosane	69	50-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3-W-170709	17-09-0614-3-I	09/07/17 13:16	Aqueous	GC 45	09/13/17	09/18/17 12:09	170913B06

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Diesel	1900	50	8.0	1.00	HD,SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decanoic Acid	0	0-1	
n-Octacosane	87	50-150	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-4-W-170709	17-09-0614-4-I	09/07/17 13:30	Aqueous	GC 45	09/13/17	09/15/17 02:12	170913B06

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Diesel	2400	50	8.0	1.00	HD,SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decanoic Acid	0	0-1	
n-Octacosane	69	50-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

GHD
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 09/09/17
Work Order: 17-09-0614
Preparation: EPA 3510/SG 10
Method: EPA 8015B (M)
Units: ug/L

Project: 359766

Page 2 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-5-W-170709	17-09-0614-5-I	09/07/17 12:29	Aqueous	GC 45	09/13/17	09/18/17 12:31	170913B06

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Diesel	38	50	8.0	1.00	SG,HD,J

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decanoic Acid	0	0-1	
n-Octacosane	86	50-150	

Method Blank	099-15-392-109	N/A	Aqueous	GC 45	09/13/17	09/18/17 11:24	170913B06
--------------	----------------	-----	---------	-------	----------	-------------------	-----------

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Diesel	ND	50	8.0	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decanoic Acid	0	0-1	
n-Octacosane	99	50-150	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

GHD
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 09/09/17
Work Order: 17-09-0614
Preparation: EPA 3510/SG 10
Method: EPA 8015B (M)
Units: ug/L

Project: 359766

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1-W-170709	17-09-0614-1-I	09/07/17 13:05	Aqueous	GC 45	09/13/17	09/18/17 11:47	170913B07S

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Motor Oil	ND	250	53	1.00	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decanoic Acid	0	0-1	
n-Octacosane	92	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2-W-170709	17-09-0614-2-I	09/07/17 12:30	Aqueous	GC 45	09/13/17	09/15/17 01:29	170913B07S

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Motor Oil	ND	250	53	1.00	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decanoic Acid	0	0-1	
n-Octacosane	69	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3-W-170709	17-09-0614-3-I	09/07/17 13:16	Aqueous	GC 45	09/13/17	09/18/17 12:09	170913B07S

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Motor Oil	64	250	53	1.00	SG,HD,J

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decanoic Acid	0	0-1	
n-Octacosane	87	68-140	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-4-W-170709	17-09-0614-4-I	09/07/17 13:30	Aqueous	GC 45	09/13/17	09/15/17 02:12	170913B07S

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Motor Oil	62	250	53	1.00	SG,HD,J

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decanoic Acid	0	0-1	
n-Octacosane	69	68-140	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

GHD
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 09/09/17
Work Order: 17-09-0614
Preparation: EPA 3510/SG 10
Method: EPA 8015B (M)
Units: ug/L

Project: 359766

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-5-W-170709	17-09-0614-5-I	09/07/17 12:29	Aqueous	GC 45	09/13/17	09/18/17 12:31	170913B07S

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Motor Oil	ND	250	53	1.00	SG

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decanoic Acid	0	0-1	
n-Octacosane	86	68-140	

Method Blank	099-15-534-152	N/A	Aqueous	GC 45	09/13/17	09/18/17 11:24	170913B07S
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Motor Oil	ND	250	53	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
Decanoic Acid	0	0-1	
n-Octacosane	99	68-140	

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RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

GHD
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 09/09/17
Work Order: 17-09-0614
Preparation: EPA 5030C
Method: EPA 8015B (M)
Units: ug/L

Project: 359766

Page 1 of 2

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1-W-170709	17-09-0614-1-E	09/07/17 13:05	Aqueous	GC 42	09/13/17	09/13/17 19:16	170913L052

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Gasoline	ND	100	48	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	70	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2-W-170709	17-09-0614-2-E	09/07/17 12:30	Aqueous	GC 42	09/13/17	09/13/17 21:36	170913L052

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Gasoline	ND	100	48	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	70	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3-W-170709	17-09-0614-3-E	09/07/17 13:16	Aqueous	GC 42	09/13/17	09/14/17 04:34	170913L052

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Gasoline	1200	200	96	2.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	81	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-4-W-170709	17-09-0614-4-E	09/07/17 13:30	Aqueous	GC 42	09/13/17	09/14/17 05:09	170913L052

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Gasoline	1500	200	96	2.00	HD

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	68	38-134	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

GHD
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 09/09/17
Work Order: 17-09-0614
Preparation: EPA 5030C
Method: EPA 8015B (M)
Units: ug/L

Project: 359766

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-5-W-170709	17-09-0614-5-E	09/07/17 12:29	Aqueous	GC 42	09/13/17	09/13/17 22:11	170913L052

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Gasoline	ND	100	48	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	69	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
QA-W-170709	17-09-0614-6-B	09/07/17 11:05	Aqueous	GC 42	09/13/17	09/13/17 21:01	170913L052

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Gasoline	ND	100	48	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	65	38-134	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-15-704-1856	N/A	Aqueous	GC 42	09/13/17	09/13/17 18:41	170913L052

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
TPH as Gasoline	ND	100	48	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	58	38-134	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

GHD
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 09/09/17
Work Order: 17-09-0614
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: 359766

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-1-W-170709	17-09-0614-1-A	09/07/17 13:05	Aqueous	GC/MS XX	09/11/17	09/11/17 18:13	170911L009

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Benzene	ND	0.50	0.14	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
Toluene	ND	1.0	0.24	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Xylenes (total)	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	0.53	1.0	0.31	1.00	J

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	96	77-120	
Dibromofluoromethane	103	80-128	
1,2-Dichloroethane-d4	124	80-129	
Toluene-d8	98	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-2-W-170709	17-09-0614-2-A	09/07/17 12:30	Aqueous	GC/MS XX	09/11/17	09/11/17 18:46	170911L009

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Benzene	ND	0.50	0.14	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
Toluene	ND	1.0	0.24	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Xylenes (total)	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	95	77-120	
Dibromofluoromethane	104	80-128	
1,2-Dichloroethane-d4	125	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Analytical Report

GHD
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 09/09/17
Work Order: 17-09-0614
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: 359766

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-3-W-170709	17-09-0614-3-A	09/07/17 13:16	Aqueous	GC/MS XX	09/11/17	09/11/17 19:18	170911L009

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Benzene	0.58	0.50	0.14	1.00	
Ethylbenzene	3.8	1.0	0.14	1.00	
Toluene	0.69	1.0	0.24	1.00	J
p/m-Xylene	1.8	1.0	0.30	1.00	
o-Xylene	0.47	1.0	0.23	1.00	J
Xylenes (total)	2.2	1.0	0.23	1.00	JA
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	102	77-120	
Dibromofluoromethane	96	80-128	
1,2-Dichloroethane-d4	112	80-129	
Toluene-d8	105	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-4-W-170709	17-09-0614-4-A	09/07/17 13:30	Aqueous	GC/MS XX	09/11/17	09/11/17 19:51	170911L009

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Ethylbenzene	160	1.0	0.14	1.00	
Toluene	91	1.0	0.24	1.00	
p/m-Xylene	170	1.0	0.30	1.00	
o-Xylene	18	1.0	0.23	1.00	
Xylenes (total)	190	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	99	77-120	
Dibromofluoromethane	94	80-128	
1,2-Dichloroethane-d4	109	80-129	
Toluene-d8	104	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

GHD
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 09/09/17
Work Order: 17-09-0614
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: 359766

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-4-W-170709	17-09-0614-4-B	09/07/17 13:30	Aqueous	GC/MS XX	09/12/17	09/12/17 17:22	170912L014

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Benzene	840	5.0	1.4	10.0	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	98	77-120	
Dibromofluoromethane	93	80-128	
1,2-Dichloroethane-d4	106	80-129	
Toluene-d8	100	80-120	

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
MW-5-W-170709	17-09-0614-5-B	09/07/17 12:29	Aqueous	GC/MS XX	09/12/17	09/12/17 21:10	170912L014

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Benzene	ND	0.50	0.14	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
Toluene	ND	1.0	0.24	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Xylenes (total)	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	95	77-120	
Dibromofluoromethane	103	80-128	
1,2-Dichloroethane-d4	123	80-129	
Toluene-d8	99	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



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Analytical Report

GHD
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 09/09/17
Work Order: 17-09-0614
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: 359766

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
QA-W-170709	17-09-0614-6-A	09/07/17 11:05	Aqueous	GC/MS XX	09/11/17	09/11/17 16:03	170911L009

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Benzene	ND	0.50	0.14	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
Toluene	ND	1.0	0.24	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Xylenes (total)	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	94	77-120	
Dibromofluoromethane	103	80-128	
1,2-Dichloroethane-d4	122	80-129	
Toluene-d8	99	80-120	

Method Blank	099-14-001-24060	N/A	Aqueous	GC/MS XX	09/11/17	09/11/17 12:15	170911L009
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Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

Parameter	Result	RL	MDL	DF	Qualifiers
Benzene	ND	0.50	0.14	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
Toluene	ND	1.0	0.24	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Xylenes (total)	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	

Surrogate	Rec. (%)	Control Limits	Qualifiers
1,4-Bromofluorobenzene	95	77-120	
Dibromofluoromethane	101	80-128	
1,2-Dichloroethane-d4	119	80-129	
Toluene-d8	98	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.

Analytical Report

GHD
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 09/09/17
Work Order: 17-09-0614
Preparation: EPA 5030C
Method: EPA 8260B
Units: ug/L

Project: 359766

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Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	099-14-001-24074	N/A	Aqueous	GC/MS XX	09/12/17	09/12/17 11:56	170912L014

Comment(s): - Results were evaluated to the MDL (DL), concentrations \geq to the MDL (DL) but $<$ RL (LOQ), if found, are qualified with a "J" flag.

<u>Parameter</u>	<u>Result</u>	<u>RL</u>	<u>MDL</u>	<u>DF</u>	<u>Qualifiers</u>
Benzene	ND	0.50	0.14	1.00	
Ethylbenzene	ND	1.0	0.14	1.00	
Toluene	ND	1.0	0.24	1.00	
p/m-Xylene	ND	1.0	0.30	1.00	
o-Xylene	ND	1.0	0.23	1.00	
Xylenes (total)	ND	1.0	0.23	1.00	
Methyl-t-Butyl Ether (MTBE)	ND	1.0	0.31	1.00	

<u>Surrogate</u>	<u>Rec. (%)</u>	<u>Control Limits</u>	<u>Qualifiers</u>
1,4-Bromofluorobenzene	95	77-120	
Dibromofluoromethane	102	80-128	
1,2-Dichloroethane-d4	120	80-129	
Toluene-d8	98	80-120	

RL: Reporting Limit. DF: Dilution Factor. MDL: Method Detection Limit.



Calscience

Quality Control - Spike/Spike Duplicate

GHD	Date Received:	09/09/17
5900 Hollis Street, Suite A	Work Order:	17-09-0614
Emeryville, CA 94608-2008	Preparation:	EPA 5030C
Project: 359766	Method:	EPA 8015B (M)

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
MW-1-W-170709	Sample	Aqueous	GC 42	09/13/17	09/13/17 19:16	170913S026
MW-1-W-170709	Matrix Spike	Aqueous	GC 42	09/13/17	09/13/17 19:51	170913S026
MW-1-W-170709	Matrix Spike Duplicate	Aqueous	GC 42	09/13/17	09/13/17 20:26	170913S026

<u>Parameter</u>	<u>Sample Conc.</u>	<u>Spike Added</u>	<u>MS Conc.</u>	<u>MS %Rec.</u>	<u>MSD Conc.</u>	<u>MSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
TPH as Gasoline	ND	2000	2094	105	2027	101	68-122	3	0-18	

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RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

GHD
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 09/09/17
Work Order: 17-09-0614
Preparation: EPA 5030C
Method: EPA 8260B

Project: 359766

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number
17-09-0562-2	Sample	Aqueous	GC/MS XX	09/11/17	09/11/17 12:48	170911S006
17-09-0562-2	Matrix Spike	Aqueous	GC/MS XX	09/11/17	09/11/17 13:20	170911S006
17-09-0562-2	Matrix Spike Duplicate	Aqueous	GC/MS XX	09/11/17	09/11/17 13:53	170911S006

Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	ND	50.00	45.51	91	44.34	89	75-125	3	0-20	
Ethylbenzene	ND	50.00	49.62	99	48.36	97	75-129	3	0-20	
Toluene	ND	50.00	46.71	93	45.20	90	75-125	3	0-20	
p/m-Xylene	ND	100.0	102.9	103	100.2	100	75-133	3	0-20	
o-Xylene	ND	50.00	51.77	104	50.67	101	75-134	2	0-20	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	41.41	83	42.59	85	64-136	3	0-20	



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RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - Spike/Spike Duplicate

GHD
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 09/09/17
Work Order: 17-09-0614
Preparation: EPA 5030C
Method: EPA 8260B

Project: 359766

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	MS/MSD Batch Number				
17-09-0571-4	Sample	Aqueous	GC/MS XX	09/12/17	09/12/17 12:29	170912S020				
17-09-0571-4	Matrix Spike	Aqueous	GC/MS XX	09/12/17	09/12/17 14:07	170912S020				
17-09-0571-4	Matrix Spike Duplicate	Aqueous	GC/MS XX	09/12/17	09/12/17 14:39	170912S020				
Parameter	Sample Conc.	Spike Added	MS Conc.	MS %Rec.	MSD Conc.	MSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
Benzene	5.033	50.00	53.35	97	46.14	82	78-120	14	0-20	
Ethylbenzene	ND	50.00	53.21	106	45.77	92	73-127	15	0-20	
Toluene	ND	50.00	52.58	105	45.03	90	72-126	15	0-20	
p/m-Xylene	6.275	100.0	108.4	102	92.75	86	70-130	16	0-30	
o-Xylene	ND	50.00	55.10	110	47.62	95	70-130	15	0-30	
Methyl-t-Butyl Ether (MTBE)	ND	50.00	49.85	100	43.33	87	69-123	14	0-20	


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RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS/LCSD

GHD
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 09/09/17
Work Order: 17-09-0614
Preparation: EPA 3510/SG 10
Method: EPA 8015B (M)

Project: 359766

Page 1 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-15-392-109	LCS	Aqueous	GC 45	09/13/17	09/14/17 23:40	170913B06			
099-15-392-109	LCSD	Aqueous	GC 45	09/13/17	09/15/17 00:01	170913B06			
<u>Parameter</u>	<u>Spike Added</u>	<u>LCS Conc.</u>	<u>LCS %Rec.</u>	<u>LCSD Conc.</u>	<u>LCSD %Rec.</u>	<u>%Rec. CL</u>	<u>RPD</u>	<u>RPD CL</u>	<u>Qualifiers</u>
TPH as Diesel	2000	2069	103	2099	105	69-123	1	0-30	

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GHD
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Date Received: 09/09/17
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Preparation: EPA 3510/SG 10
Method: EPA 8015B (M)

Project: 359766

Page 2 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number			
099-15-534-152	LCS	Aqueous	GC 45	09/13/17	09/15/17 00:24	170913B07S			
099-15-534-152	LCSD	Aqueous	GC 45	09/13/17	09/15/17 00:45	170913B07S			
Parameter	Spike Added	LCS Conc.	LCS %Rec.	LCSD Conc.	LCSD %Rec.	%Rec. CL	RPD	RPD CL	Qualifiers
TPH as Motor Oil	2000	1537	77	1555	78	69-123	1	0-30	

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RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS

GHD	Date Received:	09/09/17
5900 Hollis Street, Suite A	Work Order:	17-09-0614
Emeryville, CA 94608-2008	Preparation:	EPA 5030C
	Method:	EPA 8015B (M)
Project: 359766		Page 3 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-15-704-1856	LCS	Aqueous	GC 42	09/13/17	09/13/17 18:06	170913L052
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
TPH as Gasoline		2000	2086	104	78-120	

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RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS

GHD
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 09/09/17
Work Order: 17-09-0614
Preparation: EPA 5030C
Method: EPA 8260B

Project: 359766

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Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-001-24060	LCS	Aqueous	GC/MS XX	09/11/17	09/11/17 10:26	170911L009
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Benzene		50.00	43.36	87	79-121	
Ethylbenzene		50.00	48.16	96	80-120	
Toluene		50.00	44.30	89	80-120	
p/m-Xylene		100.0	99.83	100	80-122	
o-Xylene		50.00	49.96	100	80-128	
Methyl-t-Butyl Ether (MTBE)		50.00	40.64	81	69-123	

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RPD: Relative Percent Difference. CL: Control Limits



Calscience

Quality Control - LCS

GHD
5900 Hollis Street, Suite A
Emeryville, CA 94608-2008

Date Received: 09/09/17
Work Order: 17-09-0614
Preparation: EPA 5030C
Method: EPA 8260B

Project: 359766

Page 5 of 5

Quality Control Sample ID	Type	Matrix	Instrument	Date Prepared	Date Analyzed	LCS Batch Number
099-14-001-24074	LCS	Aqueous	GC/MS XX	09/12/17	09/12/17 10:05	170912L014
<u>Parameter</u>		<u>Spike Added</u>	<u>Conc. Recovered</u>	<u>LCS %Rec.</u>	<u>%Rec. CL</u>	<u>Qualifiers</u>
Benzene		50.00	43.45	87	79-121	
Ethylbenzene		50.00	47.41	95	80-120	
Toluene		50.00	44.70	89	80-120	
p/m-Xylene		100.0	98.09	98	80-122	
o-Xylene		50.00	49.03	98	80-128	
Methyl-t-Butyl Ether (MTBE)		50.00	41.61	83	69-123	

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RPD: Relative Percent Difference. CL: Control Limits

Sample Analysis Summary Report

Work Order: 17-09-0614

Page 1 of 1

<u>Method</u>	<u>Extraction</u>	<u>Chemist ID</u>	<u>Instrument</u>	<u>Analytical Location</u>
EPA 8015B (M)	EPA 5030C	1063	GC 42	2
EPA 8015B (M)	EPA 3510/SG 10	682	GC 45	1
EPA 8260B	EPA 5030C	1135	GC/MS XX	2


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Location 1: 7440 Lincoln Way, Garden Grove, CA 92841

Location 2: 7445 Lampson Avenue, Garden Grove, CA 92841

Glossary of Terms and Qualifiers

Work Order: 17-09-0614

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<u>Qualifiers</u>	<u>Definition</u>
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution. Therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to suspected matrix interference. The associated LCS recovery was in control.
4	The MS/MSD RPD was out of control due to suspected matrix interference.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to suspected matrix interference.
6	Surrogate recovery below the acceptance limit.
7	Surrogate recovery above the acceptance limit.
B	Analyte was present in the associated method blank.
BU	Sample analyzed after holding time expired.
BV	Sample received after holding time expired.
CI	See case narrative.
E	Concentration exceeds the calibration range.
ET	Sample was extracted past end of recommended max. holding time.
HD	The chromatographic pattern was inconsistent with the profile of the reference fuel standard.
HDH	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but heavier hydrocarbons were also present (or detected).
HDL	The sample chromatographic pattern for TPH matches the chromatographic pattern of the specified standard but lighter hydrocarbons were also present (or detected).
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
JA	Analyte positively identified but quantitation is an estimate.
ME	LCS Recovery Percentage is within Marginal Exceedance (ME) Control Limit range (+/- 4 SD from the mean).
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
SG	The sample extract was subjected to Silica Gel treatment prior to analysis.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture. All QC results are reported on a wet weight basis.
	Any parameter identified in 40CFR Part 136.3 Table II that is designated as "analyze immediately" with a holding time of <= 15 minutes (40CFR-136.3 Table II, footnote 4), is considered a "field" test and the reported results will be qualified as being received outside of the stated holding time unless received at the laboratory within 15 minutes of the collection time.
	A calculated total result (Example: Total Pesticides) is the summation of each component concentration and/or, if "J" flags are reported, estimated concentration. Component concentrations showing not detected (ND) are summed into the calculated total result as zero concentrations.

CHAIN OF CUSTODY FORM

Chevron Environmental Management Company ■ 6111 Bollinger Canyon Rd. ■ San Ramon, CA 94583 COC (of)

Chevron Site Number: 359766		Chevron Consultant: GHD																					
Chevron Site Global ID: T0600000004218		Address: 5900 Hollis St., Suite A, Emeryville, CA																					
Chevron Site Address: 2700 23rd Ave., Oakland, CA		Consultant Contact: Kiersten Hoge																					
Chevron PM: Carryl MacLeod		Consultant Phone No. 510-420-3347																					
Chevron PM Phone No.: (925) 790-3964		Consultant Project No. 170907-ww1																					
<input checked="" type="checkbox"/> Retail and Terminal Business Unit (RTBU) Job <input checked="" type="checkbox"/> Construction/Retail Job		Sampling Company: Blaine Tech Services																					
		Sampled By (Print): William Wong																					
		Sampler Signature: <i>W.Wong</i>																					
Charge Code: NWR TB-0098247-0-OML NWR TB 00SITE NUMBER-0-WBS (WBS ELEMENTS): SITE ASSESSMENT: A1L REMEDIATION IMPLEMENTATION: R5L SITE MONITORING: OML OPERATION MAINTENANCE & MONITORING: M1L		Calscience <input checked="" type="checkbox"/> Garden Grove, CA Lab Contact: Vikas Patel 7440 Lincoln Way, Garden Grove, CA 92841 Phone No: (717)895-5494																					
THIS IS A LEGAL DOCUMENT. ALL FIELDS MUST BE FILLED OUT CORRECTLY AND COMPLETELY.																							
CHEVRON MULTILINE SO: 0015245626																							
SAMPLE ID																							
Site ID	Point Name	Matrix	Top Depth	Date (yymmdd)	Temp. Blank Check Time	Other Lab	# of Containers	Contr'ner Type	EPA 8260B/GCMS	BTEX	MTBE	OXYGENATES	HYCLO	EPA 8015	TPH-G	TPH-D	TPH-MO	Turnaround Time	Standard Hours	Other Hours	Temp.	COC #	
1	MW-1-W-170709	W		170907	1105		10	Various	X	X	X	X	X	X	X	X	X	48 hours	48 hours	0	72		
2	MW-2-W-170709				1230		10		X	X	X	X	X	X	X	X	X						
3	MW-3-W-170709				1316		10		X	X	X	X	X	X	X	X	X						
4	MW-4-W-170709				1330		10		X	X	X	X	X	X	X	X	X						
5	MW-5-W-170709				1229		10		X	X	X	X	X	X	X	X	X						
6	QA-W-170709				1105		2	MIL J063	X														
Relinquished By: <i>W.Wong</i>		Company: <i>Blaine Tech Services</i>		Date/Time: <i>9-7-17 1510</i>	Relinquished To: <i>W.Wong</i>		Company: <i>Blaine Tech Services</i>		Date/Time: <i>9-7-17 1510</i>	Relinquished To: <i>W.Wong</i>		Company: <i>Blaine Tech Services</i>		Date/Time: <i>9-7-17 1510</i>	Relinquished To: <i>W.Wong</i>		Company: <i>Blaine Tech Services</i>		Date/Time: <i>9-7-17 1510</i>	Relinquished To: <i>W.Wong</i>		Company: <i>Blaine Tech Services</i>	
Relinquished By: <i>R. Smith</i>		Company: <i>Blaine</i>		Date/Time: <i>9-8-17 1035</i>	Relinquished To: <i>R. Smith</i>		Company: <i>Blaine</i>		Date/Time: <i>9-8-17 1035</i>	Relinquished To: <i>R. Smith</i>		Company: <i>Blaine</i>		Date/Time: <i>9-8-17 1035</i>	Relinquished To: <i>R. Smith</i>		Company: <i>Blaine</i>		Date/Time: <i>9-8-17 1035</i>	Relinquished To: <i>R. Smith</i>		Company: <i>Blaine</i>	
Relinquished By: <i>Tom Malley</i>		Company: <i>Blaine</i>		Date/Time: <i>9-8-17 1730</i>	Relinquished To: <i>Tom Malley</i>		Company: <i>Blaine</i>		Date/Time: <i>9-8-17 1730</i>	Relinquished To: <i>Tom Malley</i>		Company: <i>Blaine</i>		Date/Time: <i>9-8-17 1730</i>	Relinquished To: <i>Tom Malley</i>		Company: <i>Blaine</i>		Date/Time: <i>9-8-17 1730</i>	Relinquished To: <i>Tom Malley</i>		Company: <i>Blaine</i>	

0614



800-322-5555 www.gso.com

Ship From
CAL SCIENCE- CONCORD
ALAN KEMP
5063 COMMERCIAL CIRCLE
#H
CONCORD, CA 94520

Tracking #: 537544002

SDS



Ship To
CEL
SAMPLE RECEIVING
7440 LINCOLN WAY
GARDEN GROVE, CA 92841

ORC
GARDEN GROVE

A

COD: \$0.00
Weight: 0 lb(s)
Reference:
BTS (GHD), CARDNO ERI
Delivery Instructions:

D92845A



71977537

Signature Type: REQUIRED

Print Date: 9/8/2017 3:41 PM

Package 1 of 2

LABEL INSTRUCTIONS:

Do not copy or reprint this label for additional shipments - each package must have a unique barcode.

Use the "Print Label" button on this page to print the shipping label on a laser or inkjet printer. Securely attach this label to your package, do not cover the barcode.

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SAMPLE RECEIPT CHECKLIST

COOLER 1 OF 1

CLIENT: GHD

DATE: 09/09/2017

TEMPERATURE: (Criteria: 0.0°C – 6.0°C, not frozen except sediment/tissue)

Thermometer ID: SC6 (CF: +0.2°C); Temperature (w/o CF): 3.2 °C (w/ CF): 3.4 °C; Blank Sample

Sample(s) outside temperature criteria (PM/APM contacted by: _____)

Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling

Sample(s) received at ambient temperature; placed on ice for transport by courier

Ambient Temperature: Air Filter

Checked by: 1017

CUSTODY SEAL:

Cooler Present and Intact Present but Not Intact Not Present N/A Checked by: 1017

Sample(s) Present and Intact Present but Not Intact Not Present N/A Checked by: 1017

SAMPLE CONDITION:

Chain-of-Custody (COC) document(s) received with samples Yes No N/A

COC document(s) received complete Yes No N/A

Sampling date Sampling time Matrix Number of containers

No analysis requested Not relinquished No relinquished date No relinquished time

Sampler's name indicated on COC Yes No N/A

Sample container label(s) consistent with COC Yes No N/A

Sample container(s) intact and in good condition Yes No N/A

Proper containers for analyses requested Yes No N/A

Sufficient volume/mass for analyses requested Yes No N/A

Samples received within holding time Yes No N/A

Aqueous samples for certain analyses received within 15-minute holding time

pH Residual Chlorine Dissolved Sulfide Dissolved Oxygen Yes No N/A

Proper preservation chemical(s) noted on COC and/or sample container Yes No N/A

Unpreserved aqueous sample(s) received for certain analyses

Volatile Organics Total Metals Dissolved Metals

Acid/base preserved samples - pH within acceptable range Yes No N/A

Container(s) for certain analysis free of headspace..... Yes No N/A

Volatile Organics Dissolved Gases (RSK-175) Dissolved Oxygen (SM 4500)

Carbon Dioxide (SM 4500) Ferrous Iron (SM 3500) Hydrogen Sulfide (Hach)

Tedlar™ bag(s) free of condensation Yes No N/A

CONTAINER TYPE: (6) (Trip Blank Lot Number: 170711C)

Aqueous: VOA VOAh VOAna2 100PJ 100PJna2 125AGB 125AGBh 125AGBp 125PB 125PBzanna (pH_9)

250AGB 250CGB 250CGBs (pH_2) 250PB 250PBn (pH_2) 500AGB 500AGJ 500AGJs (pH_2) 500PB

1AGB 1AGBna2 1AGBs (pH_2) 1AGBs (O&G) 1PB 1PBna (pH_12) _____ _____ _____

Solid: 4ozCGJ 8ozCGJ 16ozCGJ Sleeve (____) EnCores® (____) TerraCores® (____) _____ _____ _____

Air: Tedlar™ Canister Sorbent Tube PUF _____ Other Matrix (____): _____ _____ _____

Container: A = Amber, B = Bottle, C = Clear, E = Envelope, G = Glass, J = Jar, P = Plastic, and Z = Ziploc/Resealable Bag

Preservative: b = buffered, f = filtered, h = HCl, n = HNO3, na = NaOH, na2 = Na2S2O3, p = H3PO4, Labeled/Checked by: 1017

s = H2SO4, u = ultra-pure, x = Na2SO3+NaHSO4.H2O, zanna = Zn (CH3CO2)2 + NaOH Reviewed by: 778